

PRELIMINARY AMENDMENT  
U.S. Application No.: 10/571,471  
Attorney Docket No. Q93622

**AMENDMENTS TO THE SPECIFICATION**

**Please replace the paragraph bridging pages 2 and 3 with the following amended paragraph:**

As the hydrogenation catalyst, a solid catalyst containing a metal of Group 10 or 11 of the Periodic Table of the Elements, can be listed, and, specifically, nickel, palladium, platinum and copper are listed. But, from viewpoints of suppression of nuclear hydrogenation of an aromatic ring and high yield, palladium and copper are preferable, further among these, palladium is the most preferable. Copper-based catalysts include copper, Raney copper, copper-chromium, copper-zinc, copper-chromium-zinc, copper-silica, copper-alumina and the like. Palladium-based catalysts include palladium-alumina, palladium-silica, palladium-carbon and the like.

**Please replace the second full paragraph on page 7 of the specification with the following amended paragraph:**

Hydrogen can be supplied from any of inlets of the reactor and inlets of the hydrogenation catalyst layer, and it is preferable to supply from the inlet of the reactor. That is, vaporization of water produced through dehydration is promoted by bringing into anytime existence of hydrogen in the dehydration zone and the equilibrium dehydration conversion rises, therefore, high conversion can be attained effectively compared to absence of hydrogen.

**Please replace the second full paragraph on page 9 of the specification with the following amended paragraph:**

As a catalyst, solid catalysts are preferable from the viewpoint of separation of reaction products, and catalysts containing titanium-containing silicon oxide, are preferable from the

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viewpoint of obtaining the objective product under high yield and high selectivity. As these catalysts, so-called Ti-silica catalysts containing Ti chemically bonded to silicon oxide, are preferable. For example, a catalyst prepared by supporting a Ti compound on a silica carrier, a catalyst prepared by combining a Ti compound with silicon oxide by a coprecipitation method or sol gel method, zeolite compounds containing Ti, and the like, can be listed.

**Please replace the first full paragraph (Comparative Example 1) on page 11 of the specification with the following amended paragraph:**

Comparative Example 1 (Two-layer packing)

The catalyst A of 3 m-thick as a first layer and the catalyst B of 1.2 m-thick as a second layer were packed in a reactor having an inner diameter of 4 mmφ. The first layer and second layer were heated to 230°C and 190°C, respectively, and 0.1 normal liter/minute of hydrogen and 1.6 g/minute of a cumene solution having a cumyl alcohol concentration of 23 % by weight under a pressure of [[4]] 1.4 MPa-G, were simultaneously fed to the reactor, continuously. After the reaction of 106 109 hours, a cumyl alcohol conversion was 99.8% and a selectivity of a cumene dimer (hydrogenated product of an α-methyl styrene dimer) was 0.9%.

**Please replace the paragraph bridging pages 11 and 12 of the specification with the following amended paragraph:**

The catalyst B of 0.1 m-thick as a first layer, the catalyst A of 0.2 m-thick as a second layer, the catalyst B of 0.4 m-thick as a third layer, the catalyst A of 0.4 m-thick as a fourth layer, the catalyst B of 0.4 m-thick as a fifth layer, the catalyst A of 2.4 m-thick as a sixth layer and the catalyst B of 0.4 m-thick as a seventh layer (catalyst A: 3 m-thick in total, catalyst B: 1.3 m-thick

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in total) were packed in a reactor having an inner diameter of 4 mmφ. The first and second layers, the third to fifth layers, and the sixth and sevens layers were heated to 180°C, 200°C and 230°C, respectively, and 0.1 normal liter/minute of hydrogen and 1.6 g/minute of a cumene solution having a cumyl alcohol concentration of 23 % by weight under a pressure of 4 MPa-G, were simultaneously fed to the reactor, continuously. After the reaction of 88 hours, a cumyl alcohol conversion was 99.9% and a selectivity of a cumene dimer (~~hydrogenated product of an α-methyl styrene dimer~~) was 0.2%.